

Sequoia and Kings Canyon

National Parks
National Park Service
U.S. Department of the Interior

PARK PLANS RISK-REDUCTION BURNS NEAR MINERAL KING

As part of its ongoing fire management program, the National Park Service is embarking on a series of prescribed burns in the Mineral King area of Sequoia National Park. Controlled fires have been used here since the 1960s as a tool to reduce hazardous forest fuel buildup, protect public safety, and restore ecosystems to a more natural state.

The Mineral King area is a top priority for risk-reduction burns. Large accumulations of dead trees, forest debris, and heavy brush surround visitor facilities and private development, all within a steep, narrow canyon. This combination of factors increases the risk to people, property, and the Mineral King ecosystem when wildfires start in the canyon.

The Mineral King Risk-Reduction Burn Project is a multi-year plan to reduce the potential for intense wildfires and the high cost of fighting them. Burning adjoining areas over a number of years will create a patchwork of areas with less fuel and younger growth which will slow the spread of inevitable future fires.

Periodic natural fire is part of the Sierra Nevada ecosystem. Research shows that, for the past 1500 years, fires have burned in the Atwell Grove area near Mineral King every one to 29 years, averaging one every 5.8 years. These fires kept wildland fuels from building up, and were generally of low intensity. Yet for most of the past century natural fires have been put out, due to the belief that all fire was harmful. Over the past 25 years alone, 50 lightning fires have been suppressed in the Mineral King area, sometimes at great cost.

Now it is known that prolonged fire suppression increases fire danger. Without fire, wildland fuels accumulate in ever greater amounts. Eventually lightning or a person starts a fire that ignites the heavy fuel buildup and becomes an unnaturally hot, destructive wildfire that is difficult to control.

The extent and intensity of wildfires have continued to increase in much of the western United States over the past two decades due to long-term suppression. These wildfires put people and property at greater risk, and are very costly to suppress. In 1994, the cost to fight wildfires across the United States was around \$1 billion, and 34 firefighters were killed.

It has become increasingly clear that a fire policy based on an attempt to suppress all fires is not working. Therefore, fire management has evolved into a combination of fire suppression and fire use. Fire use includes prescribed burning, which reduces the risk and cost of catastrophic wildfire by removing the fuels in a controlled way, and restores fire to its more natural behavior and effects.

In Mineral King this year, the project burn boundary surrounds 2400 acres of forest and 3000 acres of chaparral, a plant community dominated by shrubs. It lies north of the Mineral King Road in the Atwell Mill area, between the road and Paradise Ridge. It is estimated that some 2000 acres will actually burn, as fire usually moves in a patchy fashion and much of the area is rock.

The anticipated ignition date for the heavy forest fuels is mid-August, depending on conditions. Most smoke is expected to rise and travel eastward over the park. Breezes that usually move downslope at night will move some smoke to lower elevations. Igniting fire in the summer instead of the fall avoids some of the problems with smoke dispersal, when weather conditions known as inversions have a tendency to trap smoke closer to the ground.

Areas of chaparral will be ignited in the fall or early winter, depending on conditions. Because this brush burns so quickly, there is less of a problem with lingering smoke. Throughout all of the burn periods, air-quality monitoring equipment will be placed in Three Rivers to monitor carbon monoxide and particulate levels.

The fire is lit in horizontal strips, starting across the top of the ridge and working down. This prevents the flames from making large, hot runs up the hillslope. Fire crews will be present as needed to monitor its progress. The trail to Paradise Ridge may be closed temporarily, but other trails and roads should not be affected.

Most of the forested area is predicted to burn as surface fire, moving occasionally into the tops of trees. In the chaparral, fire will burn hotter and consume most of the brush. Under the forest canopy the ground debris, shrubs, and thinner-barked, fire-sensitive trees will burn. Stronger, fire-resistant trees usually survive and show superficial charring.

These burns will start to return the area to a more natural ecological condition. After heavy fuels are reduced by several burns, a natural fire cycle can more safely be permitted to return to the area. Openings in the forest created by fire permit species such as sequoias to reproduce. The thick-barked mature trees usually survive, and their seedlings need a nutritious mineral bed and lots of sunlight--both results of fire--to survive. Shrubs that are dependent on fire for rejuvenation, such as the abundant chamise, will resprout quickly. Their complex root systems remain alive underground, and resprout after fire has released nutrients back into the soil.

Most wildlife can walk, fly, or burrow to escape the burn. Post-fire, a greater diversity of wildlife is commonly evident. New growth of shrubs and small plants in open, sunlit areas provides a nutritious food source, easily accessible to grazing animals such as deer and bear. Standing dead trees, called snags, provide critical nest and feeding sites for woodpeckers and raptors such as hawks and owls.

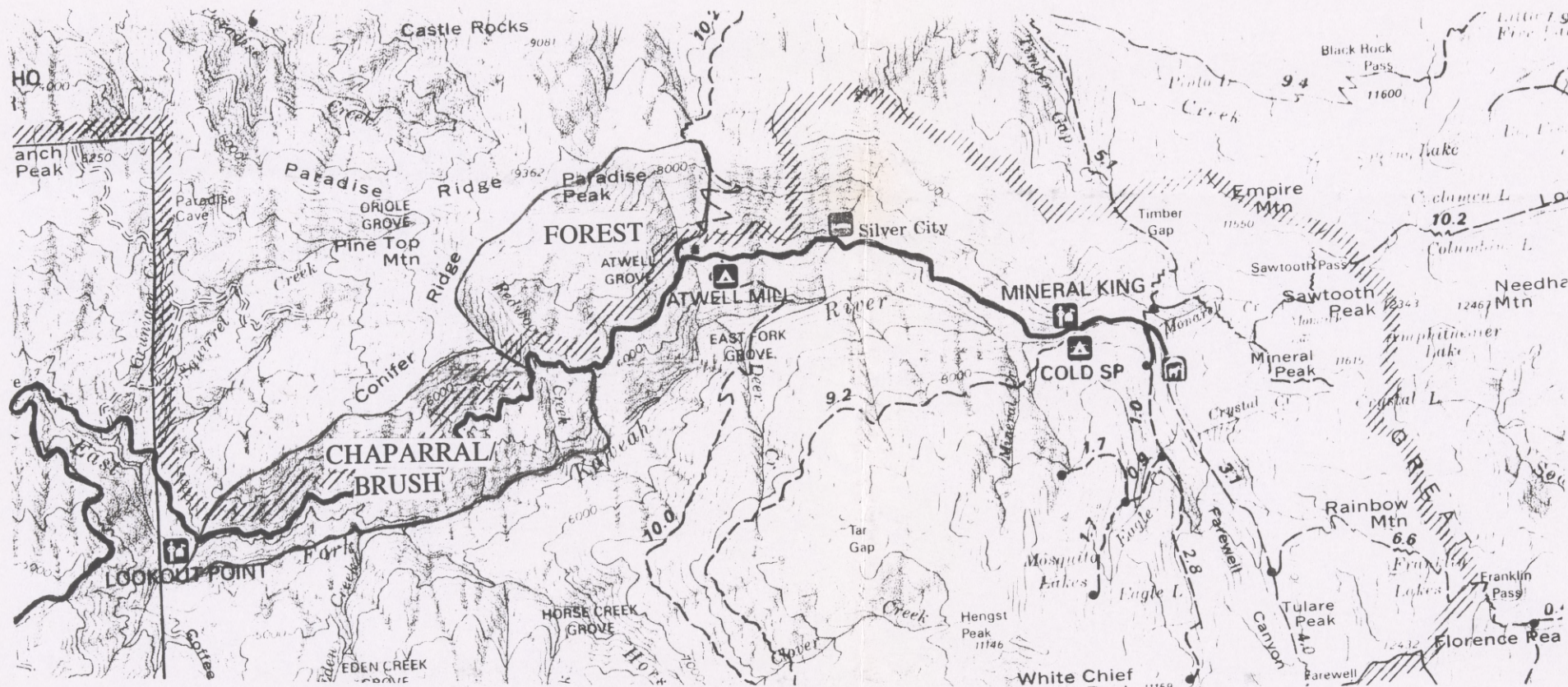
Many studies are being done in and around the burn area to monitor the effects of the project on wildlife, plants, water quality, and aquatic life. Because of the size of the project, its effects will receive more monitoring than has ever occurred on any other prescribed burn conducted by these parks. The park is concerned about the effect of prescribed burning on air and water quality, and will use monitoring information to protect these natural resources.

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—— National Park/National Forest
 // Wilderness Area

- Ranger Station
- Campground
- Group Camp
- Lodging
- Pack Station

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